Complete Summary

GUIDELINE TITLE

Preventive services for adults.

BIBLIOGRAPHIC SOURCE(S)

Institute for Clinical Systems Improvement (ICSI). Preventive services for adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2008 Oct. 68 p. [156 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Institute for Clinical Systems Improvement (ICSI). Preventive services for adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Oct. 87 p. [172 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Preventable diseases or conditions, such as:

- Coronary heart disease
- Tobacco or alcohol use/abuse
- Infectious diseases, such as pneumococcal pneumonia, influenza, tetanus, diphtheria, pertussis, hepatitis B, herpes zoster/shingles, human papilloma virus, poliomyelitis, measles, mumps, rubella, varicella
- Cervical cancer, colorectal cancer, breast cancer
- Hypertension

- Vision impairment
- Chlamydia
- Dyslipidemia
- Folic acid deficiency
- Depression
- Hearing impairment
- Obesity
- Osteoporosis and osteoporotic fractures
- Abdominal aortic aneurysm

The guideline developers also discuss, but make no specific recommendations for, preventive services related to the following conditions:

- Anxiety and stress
- Dementia
- Domestic violence and abuse
- Drug abuse
- Traumatic injury due to motor vehicle and bicycle accidents, fire injury, falls
- Menopause
- Preconception/maternal health
- Prostate cancer
- Sexually transmitted infections (other than chlamydia)
- Skin cancer
- Unintended pregnancy
- Hypothyroidism

Preventive services are not recommended for the following conditions:

- Ovarian cancer
- Diabetes
- Anemia
- Chronic obstructive pulmonary disease (COPD)
- Stroke

GUIDELINE CATEGORY

Counseling
Evaluation
Prevention
Risk Assessment
Screening

CLINICAL SPECIALTY

Family Practice
Geriatrics
Internal Medicine
Obstetrics and Gynecology
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Health Plans
Hospitals
Managed Care Organizations
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

- To provide a comprehensive approach to the provision of preventive services, counseling, education, and disease screening for average-risk, asymptomatic adults age 18 and over
- To increase the percentage of adult patients on time with Level I preventive services

TARGET POPULATION

Average-risk, asymptomatic adults age 18 and over

Note: This guideline generally does not address the needs of pregnant women, individuals with chronic disorders, or high-risk populations (there are occasional exceptions where noted).

INTERVENTIONS AND PRACTICES CONSIDERED

Screening

Screening maneuvers including:

- Risk stratification and health assessment
- Using nearly every patient contact to identify and address preventive service needs
- Alcohol abuse screening
- Mammogram
- Papanicolaou smear
- Chlamydia screening
- Colorectal cancer screening
- Hypertension screening via blood pressure measurement
- Lipid screening
- Tobacco use screening
- Vision screening via objective visual acuity testing (Snellen chart)
- Abnormal aortic aneurysm screening
- Depression screening
- Subjective hearing screening
- Height and weight measurement and calculation of body mass index (BMI)
- Osteoporosis screening via bone mineral density (BMD) testing

Counseling

Counseling and education on the following topics:

- Tobacco cessation
- Alcohol use/abuse
- Aspirin and folic acid chemoprophylaxis

  Note: Routine use of aspirin and nonsteroidal antiinflammatory drugs [NSAIDs] for the primary prevention of colorectal cancer in average risk individuals is not recommended

Prevention

Immunizations, including:

- Influenza vaccine
- Pneumococcal vaccine
- Hepatitis B vaccine
- Herpes zoster vaccine
- Human papilloma virus (HPV) vaccine
- Inactivated polio virus (IPV) vaccine
- Measles, mumps, rubella (MMR) vaccine
- Tetanus-diphtheria booster and diphtheria, tetanus, acellular pertussis (DTaP) vaccine
- Varicella vaccine

Additionally, the following preventive services are discussed, but there is insufficient evidence to warrant a recommendation:

- Counseling about advance directives
- Counseling about anxiety and stress
- Counseling about calcium chemoprophylaxis
- Clinical breast examination screening
- Routine screening for dementia
- Screening for and counseling about domestic violence and abuse
- Screening for and counseling about drug abuse
- Screening for and counseling about injury prevention
- Counseling regarding hormone replacement therapy for menopause
- Preconception counseling
- Pregnancy prevention counseling
- Prostate specific antigen (PSA) screening and digital rectal exam of the prostate
- Screening for and counseling about sexually transmitted infection (other than chlamydia)
- Screening for and counseling about skin cancer
- Hypothyroidism screening via thyroid-stimulating hormone (TSH)/thyroxine test

The following preventive services were considered but not recommended:

- CA 125 and ultrasound (for ovarian cancer screening)
- Routine screening for coronary heart disease
- Routine screening for diabetes
- Routine lab testing
- Spirometry (for chronic obstructive pulmonary disease [COPD] screening)
- Stroke screening

MAJOR OUTCOMES CONSIDERED

- Effectiveness of screening tests
- Effectiveness of counseling and education
- Effectiveness of immunization and chemoprophylaxis
- Predictive value of screening tests

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A literature search of clinical trials, meta-analysis, and systematic reviews is performed.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Classes of Research Reports:

A. Primary Reports of New Data Collection:

Class A:

- Randomized, controlled trial

Class B:

- Cohort study

Class C:

- Non-randomized trial with concurrent or historical controls
- Case-control study
- Study of sensitivity and specificity of a diagnostic test
- Population-based descriptive study

Class D:

- Cross-sectional study
- Case series
- Case report

B. Reports that Synthesize or Reflect upon Collections of Primary Reports:

Class M:

- Meta-analysis
- Systematic review
- Decision analysis
- Cost-effectiveness analysis

Class R:

- Consensus statement
- Consensus report
- Narrative review

Class X:

- Medical opinion

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Guideline Development Process

Each guideline, order set, and protocol is developed by a 6- to 12-member work group that includes physicians, nurses, pharmacists, other healthcare professionals relevant to the topic, along with an Institute for Clinical Systems Improvement (ICSI) staff facilitator. Ordinarily, one of the physicians will be the leader. Most work group members are recruited from ICSI member organizations, but if there is expertise not represented by ICSI members, one or two members may be recruited from medical groups or hospitals outside of ICSI.

The work group meets for seven to eight three-hour meetings to develop the guideline. A literature search and review is performed and the work group members, under the coordination of the ICSI staff facilitator, develop the algorithm and write the annotations and footnotes and literature citations.

Once the final draft copy of the guideline is developed, the guideline goes to the ICSI members for critical review.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

The guideline developers reviewed published cost analyses.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Critical Review Process

Every newly developed guideline or a guideline with significant change is sent to Institute for Clinical Systems Improvement (ICSI) members for Critical Review. The purpose of critical review is to provide an opportunity for the clinicians in the member groups to review the science behind the recommendations and focus on the content of the guideline. Critical review also provides an opportunity for clinicians in each group to come to consensus on feedback they wish to give the work group and to consider changes necessary across systems in their organization to implement the guideline.

All member organizations are expected to respond to critical review guidelines. Critical review of guidelines is a criterion for continued membership within ICSI.

After the critical review period, the guideline work group reconvenes to review the comments and make changes, as appropriate. The work group prepares a written response to all comments.

Approval

Each guideline, order set, and protocol is approved by the appropriate steering committee. There is one steering committee each for Respiratory, Cardiovascular, Women's Health, and Preventive Services. The Committee for Evidence-based Practice approves guidelines, order sets, and protocols not associated with a particular category. The steering committees review and approve each guideline based on the following:

- Member comments have been addressed reasonably.

- There is consensus among all ICSI member organizations on the content of the document.
- To the extent of the knowledge of the reviewer, the scientific recommendations within the document are current.
- Either a critical review has been carried out, or to the extent of the knowledge of the reviewer, the changes proposed are sufficiently familiar and sufficiently agreed upon by the users that a new round of critical review is not needed.

Once the guideline, order set, or protocol has been approved, it is posted on the ICSI Web site and released to members for use. Guidelines, order sets, and protocols are reviewed regularly and revised, if warranted.

Revision Process of Existing Guidelines

ICSI scientific documents are revised every 12 to 36 months as indicated by changes in clinical practice and literature. Every 6 months, ICSI checks with the work group to determine if there have been changes in the literature significant enough to cause the document to be revised earlier than scheduled.

Prior to the work group convening to revise the document, ICSI members are asked to review the document and submit comments. During revision, a literature search of clinical trials, meta-analysis, and systematic reviews is performed and reviewed by the work group. The work group meets for 1-2 three-hour meetings to review the literature, respond to member organization comments, and revise the document as appropriate.

If there are changes or additions to the document that would be unfamiliar or unacceptable to member organizations, it is sent to members to review prior to going to the appropriate steering committee for approval.

Review and Comment Process

ICSI members are asked to review and submit comments for every guideline, order set, and protocol prior to the work group convening to revise the document.

The purpose of the Review and Comment process is to provide an opportunity for the clinicians in the member groups to review the science behind the recommendations and focus on the content of the order set and protocol. Review and Comment also provides an opportunity for clinicians in each group to come to consensus on feedback they wish to give the work group and to consider changes needed across systems in their organization to implement the guideline.

All member organizations are encouraged to provide feedback on order sets and protocol; however, responding to Review and Comment is not a criterion for continued membership within ICSI.

After the Review and Comment period, the work group reconvenes to review the comments and make changes as appropriate. The work group prepares a written response to all comments.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note from the National Guideline Clearinghouse (NGC) and the Institute for Clinical Systems Improvement (ICSI): For a description of what has changed since the previous version of this guidance, refer to Summary of Changes Report -- October 2008.

This guideline is intended to assist in the prioritization of screening maneuvers, tests and counseling opportunities. It is not intended to diagnose or treat any condition. Consequently, once a health issue or condition has been uncovered, other ICSI guidelines (such as the "Lipid Management in Adults" guideline or "Hypertension Diagnosis and Treatment" guideline [see the NGC summary of these guidelines]) will take precedence during any further diagnosis and management.

Recommendations for preventive services in adults are presented in the form of an algorithm with 6 components, accompanied by detailed annotations. An algorithm is provided for Preventive Services for Adults. Clinical highlights and selected annotations (numbered to correspond with the algorithm) follow.

Class of evidence (A-D, M, R, X) definitions are repeated at the end of the "Major Recommendations" field.

The services in this guideline are organized alphabetically into four groups, based on their evidence of effectiveness and their priority ranking, as follows:

Level I Preventive Services that providers and care systems *must* deliver (based on best evidence). *(Annotation #2)*

Level II Preventive Services that providers and care systems *should* deliver (based on good evidence). *(Annotation #3)*

Level III Preventive Services for which the evidence is currently incomplete and/or high burden and low cost, therefore left to the judgment of individual medical groups, clinicians and their patients. *(Annotation #4)*

Level IV Preventive services that are not supported by evidence and not recommended. *(Annotation #5)*

Table 1. Adult Preventive Services That Providers and Care System *Must* Deliver (Based on Best Evidence) (Level I)

Service	19 to 39 Years	40 to 64 Years	Over 65 Years
Alcohol abuse; hazardous and harmful drinking	Identify those with risky or hazardous drinking, as well as those who have carried that behavior to the point of meeting criteria for dependence, and then provide brief intervention.		

Service	19 to 39 Years	40 to 64 Years	Over 65 Years
screening and brief counseling			
Aspirin chemoprophylaxis counseling	Discuss with postmenopausal women, men above age 40, and younger men and women who are at increased risk for coronary heart disease (CHD).		
Breast cancer screening		Mammogram every 1 to 2 years for women age 50 to 75 years.	
Cervical cancer screening	Beginning at age 21 or three years after first sexual intercourse, whichever is earlier; every 3 years after 3 consecutive normal Pap smears over 5 years	Every 3 years after 3 consecutive normal Pap smears over 5 years	Women 65 years and older with new sexual partner should resume routine screening.
Chlamydia screening	All sexually active women aged 25 years and younger, and older women at increased risk for infection		
Colorectal cancer screening		Age 50 years and older or age 45 years and older for African Americans at appropriate intervals as determined by whichever screening method is chosen.	
Hypertension screening	Blood pressure every 2 years if less than 120/80; every year if 120 to 139/80 to 89 mm Hg		
Influenza immunization	Annually throughout entire flu season for all persons who wish to decrease the likelihood of contracting influenza.		
Lipid screening	Fasting fractionated lipid screening for men over age 34 every five years every 5 years	Fasting fractionated lipid screening for men over age 34 and women over age 44 every five years.	
Pneumococcal immunization	Immunize high-risk groups once. Re-immunize those at risk of losing immunity once after 5 years.		Immunize at 65 if not done previously. Re-immunize once if 1st received more than 5 years ago and before age 65, or an appropriate immunocompromising condition is present.
Tobacco use screening and brief intervention	Establish tobacco use status and provide ongoing cessation services to all tobacco users.		

Service	19 to 39 Years	40 to 64 Years	Over 65 Years
Vision screening			Provide objective vision testing for older adults.

Table 2. Adult Preventive Services That Providers and Care Systems *Should* Deliver (Based on Good Evidence) (Level II)

Service	19 to 39 Years	40 to 64 Years	Over 65 Years
Abdominal aortic aneurysm screening			Men ages 65 to 74 who have ever smoked (greater than 100 cigarettes in lifetime)
Depression screening	Routine screening if there are systems in place to ensure accurate diagnosis, effective treatment, and careful follow-up		
Folic acid chemoprophylaxis counseling	Counsel women of reproductive age to consume 800 micrograms of folic acid per day from food sources or supplements.		
Hearing screening		Subjective hearing screen followed by counseling on hearing aid devices and making referrals as appropriate for older adults	
Hepatitis B immunization	Universal immunization for young adults less than 40 years of age		
Herpes zoster/shingles immunization			Immunize at age 60 or older patients who have no contraindications.
Human papillomavirus (HPV) immunization (females)	Catch up through age 26.		
Inactivated polio vaccine (IPV) immunization	Vaccination should occur for non-immune adults who are at greater risk of exposure to wild-type polioviruses.		
Measles, mumps, rubella (MMR) immunization	Persons born during or after 1957 should have one-dose MMR; a second dose may be required in special circumstances.		
Obesity screening	Record height, weight, and body mass index (BMI) at least annually.		

Service	19 to 39 Years	40 to 64 Years	Over 65 Years
Osteoporosis screening	Review historical risk factors for osteoporosis, and record accurate serial height measurements with a stadiometer and observe posture for kyphosis.		
Tetanus-diphtheria (Td) immunization	All adults should have completed a primary Td series. For all adults, immunize with a booster dose of Td every 10 years thereafter.		
Varicella immunization	For all adults without evidence of immunity, a dose of varicella vaccine should be given followed by a second dose at an interval of at least 28 days. A catch-up second dose of varicella vaccine is recommended for all children, adolescents, and adults who received only one dose previously.		

Preventive Services for Which the Evidence Is Currently Incomplete and/or High Burden and Low Cost, Therefore Left to the Judgment of Individual Medical Groups, Clinicians and Their Patients (Level III)

- Advance directives counseling
- Anxiety and stress counseling
- Calcium chemoprophylaxis counseling
- Clinical breast exam screening
- Dementia routine screening
- Domestic violence and abuse screening and counseling
- Drug abuse screening and counseling
- Injury prevention screening
    - Bicycle safety
    - Fall prevention
    - Fire prevention
    - Motor vehicle safety
- Menopause and hormone therapy counseling
- Preconception counseling
- Pregnancy prevention counseling
- Prostate-specific antigen (PSA) screening and digital rectal exam of the prostate
- Sexually transmitted infection counseling (other than chlamydia)
- Sexually transmitted infection screening (other than chlamydia)
- Skin cancer screening and counseling
- Thyroid-stimulating hormone (TSH)/thyroxine (for hypothyroidism screening)

Preventive Services That Are Not Supported by Evidence and Not Recommended (Level IV)

- CA 125 and ultrasound (for ovarian cancer screening)
- Coronary heart disease routine screening
- Diabetes routine screening
- Lab testing (routine)
- Spirometry (for chronic obstructive pulmonary disease [COPD] screening)
- Stroke screening

Clinical Highlights

- All clinic visits—whether acute, chronic, or for preventive services—are opportunities for prevention. Incorporate appropriate preventive service at every opportunity. (*Annotation #1*)
- Address or initiate adult preventive services that providers and care systems *must* deliver (based on best evidence) (Level I) (*Annotation #2; Aim #1*)
    - Alcohol abuse; hazardous and harmful drinking screening and brief counseling
    - Aspirin chemoprophylaxis counseling
    - Breast cancer screening
    - Cervical cancer screening
    - Chlamydia screening
    - Colorectal cancer screening
    - Hypertension screening
    - Influenza immunization
    - Lipid screening
    - Pneumococcal immunization
    - Tobacco use screening and brief intervention
    - Vision screening
- Provide timely, appropriate interventions and optimal follow-up (*Annotation #6*)

Preventive Services for Adults Algorithm Annotations

1. **System Support/Alerts for Preventive Services**

   In order to provide consistent, high-quality care, the identification and delivery of preventive services needed by each patient require a systematic care team-based approach rather than relying solely on the memory and actions of individual clinicians. Components of system support include not only standing orders, task delegation, and automatic reminders, but concepts such as previsit planning, postvisit or between-visit outreach, decision support, system alerts, shared decision-making, patient activation, and care management *[R]*.

   In order to provide preventive services, it is first necessary to know which services are needed for individual patients. This includes both knowing when the last services were provided and an evaluation of individual risk factors. The National Guideline Clearinghouse (NGC) summary of the Institute for Clinical Systems Improvement (ICSI) guideline Primary Prevention of Chronic Disease Risk Factors can be a helpful starting point. As the dates of latest service and risk factors are identified, they should be recorded in the medical record in a way that facilitates visualization and action during visits.

   Nearly every patient contact for any reason should be used to identify and address preventive service needs. A system that supports preventive care should include both the patient and the whole care team. However, the work group recognizes that urgent or emergent visits or even routine visits may not always present preventive service opportunities. In order to facilitate the necessary prioritization of services when time is limited, the work group has separated effective services into two groups so that those services that have

the largest impact and are most cost effective can be addressed first. This prioritization can be used during individual patient visits, as well as by the clinic or medical group in developing or improving practice systems for addressing the needs of whole clinic populations.

2. **Preventive Services That Providers and Care Systems *Must* Deliver (Based on Best Evidence) (Level I)**

Level I preventive services are worthy of attention at every visit. Busy clinicians cannot deliver this many services in any single visit. However, with systems in place to track whether or not patients are up-to-date with the high-priority preventive services recommended for their age group, clinicians can offer the high priority services as opportunities present.

Alcohol Abuse; Hazardous and Harmful Drinking Screening and Brief Counseling (Level I)

Service

Providers must identify those with risky or hazardous drinking as well as those who have carried that behavior to the point of meeting criteria for dependence, and then provide a brief intervention. In the U.S., risky/hazardous drinking is defined as the number of standard drinks (12 oz. beer, 1 glass of wine, or mixed drink) in a given time period:

- Women: greater than 7 drinks/week or greater than 3 drinks/occasion
- Men: greater than 14 drinks/week or greater than 4 drinks/occasion *[R]*

Screening can be done by using a validated questionnaire such as AUDIT, which detects hazardous or harmful alcohol use and is more amenable to brief interventions *[C]*.

Other questionnaires, especially the four-question CAGE-AID *[C]*) are primarily designed to identify patients with dependence or abuse, and do not include questions about the quantity or frequency *[C]*.

See Appendix B, "Alcohol and Drug Use/Abuse Screening Tool" in the original guideline document for the AUDIT Structured Interview and CAGE-AID Questionnaire.

Efficacy

The U.S. Preventive Services Task Force in 2004 "found good evidence that screening in primary care settings can accurately identify patients whose levels or patterns of alcohol consumption do not meet criteria for alcohol dependence, but place them at risk for increased morbidity and mortality." It also "found good evidence that brief behavioral counseling interventions with follow-up produce small to moderate reductions in alcohol consumption that are sustained over 6- to 12-month periods or longer" *[M]*. A standardized review of the clinically preventable burden and cost effectiveness of 25

preventive services recommended by the U.S. Preventive Services Task Force (USPSTF) found this service to have the fourth highest priority score and one of only six services that were actually cost-saving from a societal perspective. Additionally, the study demonstrated that problem drinking screening and brief interventions in primary care are one of the most effective and cost effective clinical preventive services. It ranks very close to tobacco cessation counseling, yet it is one of the least commonly delivered *[M]*.

Counseling Messages

Brief counseling should follow the 5A model (a variation on tobacco intervention guideline):

- Assess current and historical use of alcohol.
- Advise patients to reduce use to moderate levels and avoid binge drinking.
- Agree on individual goals for reduction or abstinence.
- Assist with motivation, skills, and supports.
- Arrange follow-up support and repeated counseling, including referral if needed.

Other messages that may be of value include:

- Advise all females of childbearing age of the harmful effects of alcohol on a fetus and the need for cessation during pregnancy.
- Reinforce not drinking and driving.
- Advise patients not to ride with someone under the influence of alcohol and to prevent him or her from driving.

Related Guidelines

The NGC summary of the ICSI guideline Primary Prevention of Chronic Disease Risk Factors.

Aspirin Chemoprophylaxis Counseling (Level I)

Service

Aspirin prophylaxis must be discussed with postmenopausal women, men above the age of 40, and younger men and women who are at increased risk for coronary heart disease (CHD) because of tobacco use, dyslipidemia, hypertension, diabetes, or family history of premature CHD.

Efficacy

The U.S. Preventive Services Task Force recommends a discussion of aspirin therapy for primary prevention of myocardial infarction with patients at risk of CHD *[M]*.

Although the U.S. Preventive Services Task Force found there is fair evidence that higher doses of aspirin and nonsteroidal antiinflammatory drugs

(NSAIDs) used over longer periods of time may reduce the incidence of colorectal cancer, the task force concludes the harms outweigh the benefits and recommends against routine use of aspirin and NSAIDs for the primary prevention of colorectal cancer in average risk individuals *[R]*.

Estimates of the magnitude of benefits and harms of aspirin therapy vary with an individual's risk for CHD. Estimates of benefits and harms of aspirin therapy to 1,000 individuals are as follows: CHD events avoided, 1-20; major gastrointestinal bleeding events caused, 2-4; hemorrhagic strokes caused, 0-2 *[M]*.

Using a risk calculator provides a more accurate estimate of cardiovascular risk. Prior to publication of the nurses' health study results, the USPSTF concluded that the balance of benefits and harms from aspirin chemoprophylaxis is most favorable in patients at high risk for CHD (five-year risk greater than or equal to 3%), including all postmenopausal women and all men over the age 40.

The optimum dosage of aspirin therapy is not known. Doses of 81 mg per day appear as effective as higher doses.

Breast Cancer Screening (Level I)

Service

Screening mammogram must be performed every 1 to 2 years for women age 50 to 75 years.

Mammograms may be performed at the mutual consent of the patient and provider in women over the age of 75.

Women age 40 to 49 years with high risk factors should initiate annual screening. High risk factors include:

- Previous breast biopsy demonstrating atypical hyperplasia
- Family history of breast cancer in the patient's mother, sister, or daughter
- Past personal history of breast cancer

Efficacy

The most important tool in the early detection of breast cancer is screening mammography. The USPSTF updated its recommendation in 2002, finding "fair evidence that mammography screening every 12 to 33 months significantly reduces mortality from breast cancer." They concluded that the evidence is strongest for women aged 50 to 69 and that the clinical trials reveal no clear difference due to interval within the 12 to 33-month time range. Their recommendation is for "mammography, with or without clinical breast exam (CBE) every one to two years for women aged 40 and older" *[M]*. This extension to the 40- to 49-year-old group has been controversial.

The evidence for mortality reduction for low-risk women of this age group is inconclusive. Therefore routine screening of women age 40-49 is left to the judgment of the individual medical groups, clinicians and their patients.

Related Guidelines

The NGC summary of the ICSI guideline Diagnosis of Breast Disease.

Cervical Cancer Screening (Level I)

Service

All women should be screened for cervical cancer beginning at age 21 or three years after initiating sexual intercourse, whichever is earlier *[R]*. Screening should be performed every three years after three consecutive normal Pap smears over five years *[M]*, *[R]*.

Women age 65 and older who have a new sexual partner should resume routine screening.

For women who have had a total hysterectomy for benign disease, and who do not have a history of cervical intraepithelial neoplasia (CIN) 2/3, Pap smears are no longer indicated.

Human papillomavirus (HPV) testing may be used as an adjunct to Pap smear screening to help minimize unnecessary colposcopies and other interventions *[C]*. The role of HPV testing has been expanding *[A]*, *[C]* and will continue over the next few years. The work group will continue to review new evidence.

Efficacy

Currently there is no evidence to support more frequent Pap smears during the prenatal/postpartum period. In fact, hormone levels up to six weeks postpartum are often not yet back to normal, which can influence Pap smear results.

After age 65, there is no clear evidence for continuing Pap smears in women who have had previous normal screening.

Related Guidelines

The NGC summary of the ICSI guideline Initial Management of Abnormal Cervical Cytology (Pap Smear) and HPV Testing.

Chlamydia Screening (Level I)

Service

Routine screening for chlamydia must be performed for all sexually active women aged 25 years and younger and older women at increased risk for infection *[M]*, *[R]*.

Risk factors include:

- Having new or multiple sex partners
- Having prior history of a sexually transmitted infection (STI)
- Not using condoms consistently and correctly

Refer to the original guideline document for information on burden of suffering from chlamydia.

Efficacy

The sensitivity of available screening tests for chlamydia infection is 80% and higher *[M]*. The U.S. Preventive Services Task Force does not recommend a specific screening test as studies have generally been performed in ideal circumstances in small populations with high prevalence rates. However, they concluded that nucleic acid amplification tests had higher sensitivities and specificities than older antigen detection tests and better sensitivities than culture *[M]*. Following detection, treatment with antibiotics approaches 100% efficacy. Two randomized studies have observed a decrease in pelvic inflammatory disease following Chlamydia screening *[A]*, *[C]*.

Colorectal Cancer Screening (Level I)

Service

Colorectal cancer screening must be performed in average-risk patients 50 years of age, or 45 years of age and older for African Americans. No older age limit has been clearly established, although 80 has been suggested. The decision to stop screening would clearly be influenced by comorbidities, patient preferences and expected life span (at least 8 to 10 years to warrant continued screening).

Efficacy

Criteria for routine screening for colorectal cancer:

- 50 years old or if African American, 45 years old *[R]*
- No personal history of polyps and/or colorectal cancer
- No personal history of inflammatory bowel disease *[R]*
- No family history of colorectal cancer in:
    - One first-order relative diagnosed before age 60, or
    - Two first-order relatives diagnosed at any age *[B]*
- No family history of adenomatous polyps in:
    - One first-order relative diagnosed before age 60

(A single first-degree relative diagnosed with colorectal cancer after age 60 may put an individual at a slightly increased risk and may warrant starting

colorectal cancer screening at age 40. A single first degree relative with an adenomatous polyp diagnosed after age 60 may put the individual at a slightly increased risk and may also warrant starting colorectal cancer screening at age 40 *[C]*.)

Tests to primarily detect cancer

- Stool testing
- Guaiac-based fecal occult blood testing (gFOBT) annually
- Fecal immunochemical testing (FIT) annually
- Stool deoxyribonucleic acid testing (sDNA), interval unknown

Tests to detect adenomatous polyps and cancer

- 60 cm flexible sigmoidoscopy every five years with or without stool test for occult blood annually
- Double-contrast barium enema every five years
- Computed tomography (CT) colonography every five years
- Colonoscopy every ten years

The ICSI Colorectal Cancer guideline (see NGC summary) summarizes the evidence for the effectiveness of the various screening tests commonly used for colorectal cancer screening.

Related Guidelines

The NGC summary of the ICSI guideline Colorectal Cancer Screening.

Hypertension Screening (Level I)

Service

To detect and monitor hypertension, blood pressure must be measured at least every two years for adults with BP less than 120/80 and every year if BP is 120-139/80-89 mm Hg. Higher blood pressures should be confirmed and managed per protocol. As a practical matter, this standard may be most reliably implemented if blood pressure is measured at every patient visit *[R]*.

Efficacy

Periodic Screening in Adults at Patient Visits

Hypertension is an important public health problem that affects 25% to 30% of adult Americans. Hypertension is a major risk factor for ischemic heart disease, left ventricular hypertrophy, renal failure, stroke, and dementia. Conversely, blood pressure control is correlated with a reduction in incidence of myocardial infarctions, strokes, and heart failure *[M]*, *[R]*.

Standardized Blood Pressure Measurement

Accurate, reproducible blood pressure measurement is necessary to ensure correct blood pressure classification and to allow valid comparisons among serial pressure recordings *[R]*.

Blood Pressure Screening Classification

The relationship between blood pressure measurement and vascular risk is continuous and graded. The risk of cardiovascular disease doubles with each increment of 20/10 above 115/75. Thus the classification of adult blood pressure is somewhat arbitrary *[M]*, *[R]*.

Confirming Elevation/Education and Risk Factor Assessment

A proposed follow-up schedule based on the initial blood pressure level as well as diabetes, cardiovascular or renal disease and risk factors is noted in the Hypertension Diagnosis and Treatment guideline (see NGC summary). Recommend blood pressure confirmation and follow-up within two months if the blood pressure is 140 to 159/90 to 94. Recommend blood pressure confirmation and follow-up within one month if the blood pressure is greater than 160/100.

Counseling Messages

- If BP is greater than 120/80, it needs to be confirmed and evaluated in the context of the patient's risk factors.

While the evidence is limited, clinicians may consider encouraging patients to modify lifestyle to promote blood pressure control, especially in the presence of additional risk factors for vascular disease, such as dyslipidemia or diabetes mellitus. Important modifications include weight loss if overweight, limiting alcohol use, nicotine abstinence, increased physical activity and reduced dietary sodium and increased potassium and calcium intake *[C]*, *[R]*.

Related Guidelines

The NGC summary of the ICSI guideline Hypertension Diagnosis and Treatment.

Influenza Immunization (Level I)

Service

Immunization must be provided annually throughout entire flu season for all persons who wish to decrease the likelihood of contracting influenza.

Related Guidelines

The NGC summary of the ICSI guideline Immunizations.

Lipid Screening (Level I)

Services

A fasting cholesterol fractionation (total cholesterol, calculated low-density lipoprotein (LDL)-cholesterol, high-density lipoprotein (HDL)-cholesterol and triglyceride) must be done for men over age 34 and women over age 44 every five years.

If patient is not fasting and probability of a return visit is low, consider checking total cholesterol and HDL-cholesterol. If available, also consider measuring direct LDL-cholesterol.

Based on risk assessment, patients and providers should discuss the issues surrounding lipid screening with men between the ages of 20 and 34 years and women between the ages of 20 and 44 years. A specific example would be the need to screen those men aged 20 to 34 years and women aged 20 to 44 years with first-degree relatives with total cholesterol greater than 300 or history of premature CHD.

Individuals with total cholesterol less than 200, LDL less than 130, triglyceride less than 200, and HDL of 40 or above have a desirable cholesterol level and should be advised to repeat cholesterol fractionation in five years.

Individuals with total cholesterol greater than or equal to 200, LDL greater than or equal to 130, triglyceride greater than or equal to 200, and HDL less than 40 may be at higher risk of vascular disease and these patients should follow treatment recommendations as outlined in the NGC summary of the ICSI guideline Lipid Management in Adults.

Patients whose screening recommendations would be different include those who:

- Have histories of CHD, cerebrovascular disease (CVD), peripheral vascular disease (PVD), diabetes mellitus (DM), metabolic syndrome, or who are being case managed for dyslipidemia. Their disease management will involve a more aggressive approach to lipid monitoring.
- Have health status or life expectancy which would not be affected by knowledge of their lipid status (e.g., those with comorbid conditions such as terminal cancer).
- Are in circumstances where cholesterol levels may not represent their usual levels. These situations include acute illness, hospitalization, unintended weight loss, pregnancy, or lactation within the previous three months. Screening should be delayed under these circumstances.

Lipid testing is recommended because elevated LDL, elevated triglycerides, or/and low HDL are important risk factors for CHD. Treatment of these risk factors is readily available and significantly decreases the risk for CHD.

Efficacy

There is good evidence that lipid measurements can identify in men greater than age 34 years and women greater than age 44 years individuals at increased risk of CHD and good evidence that treatment substantially reduces the incidence of CHD *[A]*, *[B]*, *[M]*, *[R]*.

No clinical trials address the treatment of dyslipidemia among men aged 20 to 34 years and among women aged 20 to 44 years. Screening should be individualized for patients in these age groups.

Fractionated cholesterol is the most effective screening test for dyslipidemia because elevated LDL and triglycerides or low HDL are risk factors for vascular disease *[R]*.

Some patients should not be offered lipid screening as outlined in this guideline. It is well recognized that cholesterol interpretation depends on the presence of other risk factors for large vessel disease. Patients with diabetes mellitus are at high risk for large vessel disease and for that reason should undergo aggressive lipid management. Patients with coronary artery disease (CAD), PVD, and/or CVD should also be aggressively managed for dyslipidemia *[R]*.

Related Guidelines

The NGC summary of the ICSI guideline Lipid Management in Adults.

Pneumococcal Immunization (Level I)

Service

High-risk groups must be immunized once. Re-immunize those at risk of losing immunity once after five years. Immunize at 65 if not done previously. Re-immunize once if first received was greater than five years ago and before age 65 or an appropriate immunocompromising condition is present.

Related Guidelines

The NGC summary of the ICSI guideline Immunizations.

Tobacco Use Screening and Brief Intervention (Level I)

Service

Providers must establish tobacco use status for all patients *[R]*. All forms of tobacco should be screened. Provide ongoing cessation services to all tobacco users at every opportunity *[R]*.

Establish secondhand smoke exposure status for all patients. Advise all patients exposed to secondhand smoke that exposure is harmful. Encourage a smoke-free living and working environment for patients, and assist the exposed patient to communicate with other household members about

decreasing smoke in their house. Encourage the patient to support smoking cessation efforts among other household members who use tobacco *[R]*.

Efficacy

Tobacco use is the single most preventable cause of death and disease in our society. There is good evidence that clinical-based interventions are effective. Tobacco cessation services are most effective when offered on a regular basis to all patients who use tobacco *[R]*.

While readiness-stage intervention is commonly used, evidence does not strongly support it.

The recommended intervention includes promoting a smoke-free living environment because secondhand smoke is a major contributor to tobacco-related health problems.

Structured physician clinical-based smoking cessation counseling is more effective than usual care in reducing smoking rates *[A]*. The addition of telephone-based counseling may result in further improvements in cessation *[A]*. Numerous effective pharmacotherapies for smoking cessation now exist. Except in the presence of contraindications, these should be used with all patients attempting to quit smoking.

Counseling Messages

The key components of successful tobacco cessation interventions are:

- Ask about tobacco use and smoke exposure at every opportunity.
- Advise all users to quit.
- Assess willingness to make a quit effort.
- Assist users who are willing to make a quit attempt.
- Arrange follow-up.

These components are best carried out when the entire clinical staff is organized to provide these services.

Related Guidelines

The NGC summary of the ICSI guideline Primary Prevention of Chronic Disease Risk Factors.

Vision Screening (Level I)

Service

Objective vision testing (Snellen chart) for asymptomatic patients must be provided only for older adults. The work group concurs with the U.S. Preventive Services Task Force conclusion that there is insufficient data to recommend a specific screening frequency. Limited data on progression of vision loss suggests that screening once every 2 to 10 years is reasonable.

For purposes of performance measurement, screening frequency is specified as once every five years.

Efficacy

Vision screening has been recommended for elderly adults by the USPSTF based upon separate evidence of high prevalence of under-corrected impairments, the accuracy of screening tests, the effectiveness of eye glasses, and the willingness of some individuals to follow-through with additional screening and purchase of eye glasses. No studies have directly demonstrated a relationship between vision screening and improved usual corrected vision, improved quality of life, or activities of daily living. Inadequately corrected vision can become a barrier to care.

A review of epidemiologic studies conducted in the United States, United Kingdom, and Australia concluded that the prevalence of under-corrected visual impairment is about 10% between the ages of 65 and 75 and 20% above the age of 75 *[R]*. These summary estimates include only one U.S. study *[C]*, but are generally consistent with other U.S. studies *[A]*, *[B]*, *[C]*.

3. **Preventive Services That Providers and Care Systems *Should* Deliver (Based on Good Evidence) (Level II)**

Level II services have been shown to be effective and should be provided whenever possible. If systems/care management teams are successful in keeping patients on time with high-priority services during illness and disease management visits, preventive services in the second group can be delivered at any opportunity once Level I services are complete.

Abdominal Aortic Aneurysm Screening (Level II)

Screening

For *men* ages 65 to 75 who have *ever* (greater than 100 cigarettes in lifetime) smoked, a one-time screening ultrasonogram for abdominal aortic aneurysm should be performed.

For *men* ages 65 to 75 who have *never* smoked, there are *no recommendations for or against* a one-time screening ultrasonogram for abdominal aortic aneurysm.

For *women*, regardless of age or smoking status, screening ultrasonography for abdominal aortic aneurysm *is not recommended [M]*.

Refer to the original guideline document for information on efficacy of abdominal aortic aneurysm screening.

Depression Screening (Level II)

Service

Routine depression screening should be performed for adult patients but only if the practice has "systems in place to ensure that positive results are followed by accurate diagnosis, effective treatment, and careful follow-up. Benefits from screening are unlikely to be realized unless such systems are functioning well" *[M]*.

There are many instruments that have been well tested and validated for screening, ranging from two questions to the patient health questionnaire (PHQ)-9, a nine-question survey that is being increasingly used in primary care settings to estimate severity and provide monitoring over time, as well as for initial screening *[C]*. See the NGC summary of the ICSI guideline Major Depression in Adults in Primary Care for example instruments and recommendations about management.

Efficacy

When combined with systematic management, screening can be very effective. There is now considerable evidence from many randomized trials *[M]*, *[R]* that it is possible to improve treatment (both medications and counseling) in primary care settings for patients with depression, but these trials have all implemented systematic ways to:

- Provide care management with close follow-up by a non-physician working with the primary care physician
- Enhance planned collaboration with mental health providers
- Provide education and self-management support

Counseling Messages

There is no evidence that simple brief messages have any effect.

Related Guidelines

The NGC summary of the ICSI guideline Major Depression in Adults in Primary Care.

Folic Acid Chemoprophylaxis Counseling (Level II)

Service

Providers should counsel women of reproductive age to consume 800 micrograms of folic acid per day from food sources and/or supplements.

Efficacy

Neural tube defects (NTDs) are common birth defects that affect approximately 3,000 pregnancies each year *[R]*. The occurrence of NTDs is reduced by 50% to 70% with the daily periconceptional consumption of 400 micrograms of folic acid *[A]*. Not all women receive adequate levels of folic acid in their diets and the 2005 March of Dimes Gallup survey indicated the number taking daily supplements is declining. When asked what would

motivate them to take a supplement, the most common reported needs were being sick or a doctor's recommendation *[R]*.

Counseling Messages

- Eat folic acid-rich foods and fortified foods such as dark-green leafy vegetables; dried beans and peas; whole grain, fortified enriched grain products and breakfast cereals; citrus fruits and berries.
- Take a vitamin supplement containing folic acid.

Related Guidelines

The NGC summary of the ICSI guideline Routine Prenatal Care.

Hearing Screening (Level II)

Service

Subjective hearing screening (by questionnaire) followed by counseling on the availability of hearing aid devices and making referrals as appropriate should be provided for older adults. The work group concurs with the U.S. Preventive Services Task Force conclusion that there is insufficient data to recommend a specific screening frequency. Limited data on progression of hearing loss suggests that screening once every 2 to 10 years is reasonable.

Efficacy

No studies have directly demonstrated a relationship between hearing screening and improved hearing function, hearing-related quality of life, or activities of daily living. Inadequately corrected hearing can become a barrier to care, however. Hearing screening has been recommended for elderly adults by the USPSTF based upon separate evidence of high prevalence of hearing impairment, the accuracy and inexpensiveness of simple screening questionnaires, the effectiveness of hearing aids, and the willingness of 40% to 60% of individuals to follow through with additional screening and purchase of hearing aids. The prevalence of uncorrected hearing loss in the elderly is approximately 25% *[A]*, *[C]*.

Evidence is not clear on a specific age cutoff, particularly for undetected hearing loss.

Hepatitis B Immunization (Level II)

Service

Universal Routine Vaccination

Hepatitis B vaccination should occur for those at high risk for exposure to this disease, as well as all infants, children, adolescents, and young adults less than 40 years of age. Please pay special attention with regard to schedule and dosing as it varies by risk and age.

Related Guidelines

The NGC summary of the ICSI guideline Immunizations.

Herpes Zoster/Shingles Immunization (Level II)

Service

Zoster vaccine should be given to all persons aged greater than or equal to 60 years who have no contraindications, including persons who report a previous episode of zoster or who have chronic medical conditions. The vaccine should be offered at the patient's first clinical encounter with his or her health care provider.

Efficacy

Zostavax, the only currently licensed zoster vaccine, is a lyophilized preparation of a live, attenuated strain of varicella, the same Oka/Merck strain used in the varicella vaccines. However, its minimum potency is at least 14 times the potency of single-antigen varicella vaccine. In a large clinical trial, zoster vaccine reduced the risk for developing zoster by 51.3% (95% confidence interval [CI] = 44.2-57.6; p<0.001) *[A]* and was 66.5% (95% CI = 47.5-79.2; p<0.001) efficacious for preventing postherpetic neuralgia (PHN). It was partially efficacious at preventing zoster with protection declining with age at vaccination from 65.5% in 60-69 year olds to 21% in those over 80 at the time of vaccination *[A]*. It was also partially efficacious at reducing the severity and duration of pain and at preventing PHN among those developing zoster.

Related Guidelines

The NGC summary of the ICSI guideline Immunizations.

Human Papillomavirus (HPV) Immunization (Level II)

Service

Routine use of the human papillomavirus (HPV) vaccine should be performed for all 11- to 12-year-old females and catch-up for females ages 12 through 26.

A new vaccine for HPV has been licensed for women ages 9 through 26, and the Advisory Committee on Immunization Practices (ACIP) has recommended routine use of the vaccine for all 11- to 12-year-old females, and catch-up use of the vaccine for females age 12 through 26. This vaccine contains non-infectious self-assembling viral particles for four strains of HPV and alum adjuvant. The strains included are 6, 11, 16, and 18. Strains 16 and 18 account for 70% of oncogenic infections, and strains 6 and 11 account for 90% of venereal warts. This vaccine is similar to hepatitis B vaccines in both its manufacturing and components, differing only in the antigen used.

Efficacy

A three-dose series is recommended routinely for all females ages 11 to 12, and as early as age 9. Catch-up is worth doing up through age 26 *[R]*. While substantial numbers of older females have HPV infection, most have only one strain and will benefit from the vaccine. In economic models, the most cost effective schedule is to routinely immunize all women at ages 11 to 12 and to do catch-up through age 26. It is not necessary or desirable to test for previous HPV infection when starting the immunization series for sexually active women.

Related Guidelines

The NGC summary of the ICSI guideline Immunizations for specific dosing schedule and intervals.

Inactivated Polio Vaccine (IPV) Immunization (Level II)

Service

Vaccination should occur for non-immune adults who are at a greater risk of exposure to wild-type polioviruses, including the following:

- Travelers to areas or countries where polio is or may be epidemic or endemic
- Members of communities or specific population groups with polio
- Laboratory workers handling specimens that may contain polio viruses
- Health care professionals in close contact with patients who may be excreting wild-type polio viruses

Most adults living in the U.S. are immune as a result of vaccination received as children. Furthermore, adults in the U.S. in general have little risk of exposure to wild-type poliovirus.

Incompletely immunized adults, those who previously received less than a full primary course of the oral or the inactivated polio vaccine, should receive the remaining required doses of IPV vaccine, regardless of the length of time since the past doses or the forms of the vaccine. Unimmunized adults should undergo primary immunization with the inactivated polio virus vaccine. This is recommended over a minimum of seven months.

Related Guidelines

The NGC summary of the ICSI guideline Immunizations.

Measles, Mumps, Rubella (MMR) Immunization (Level II)

Service

Adults who are lacking documentation of vaccination or evidence of disease and who were born during or after 1957 should receive one dose of MMR. A second dose of MMR is recommended for adults who:

- Were recently exposed to measles or in an outbreak setting
- Were previously vaccinated with killed measles vaccine
- Were vaccinated with an unknown vaccine during 1963-1967
- Are students in postsecondary educational institutions
- Work in health care facilities
- Plan to travel internationally

Related Guidelines

The NGC summary of the ICSI guideline Immunizations.

Obesity Screening

Service

Height, weight and body mass index (BMI) should be recorded at least annually.

A BMI greater or equal to 30 is defined as obese, and a BMI of 25 to 29 is defined as overweight. Intensive intervention for obese individuals, based on BMI, is recommended by the U.S. Preventive Services to help control weight *[M]*.

Efficacy

The BMI is reliable and valid for identifying adults at increased risk for mortality and morbidity due to obesity or overweight *[M]*.

Clinicians may use waist circumference as a measure of central adiposity. Men with waist circumferences greater than or equal to 40 inches (102 centimeters) and women with a waist circumference greater than or equal to 35 inches (88 centimeters) are at increased risk for cardiovascular disease *[D]*.

The ICSI guideline, Prevention and Management of Obesity (Mature Adolescents and Adults) (see NGC summary), states that physician intervention can be effective; the physician can have an important influence and successful weight management is possible. This guideline also states that weight management requires a team approach.

The National Weight Control Registry includes over 4,000 adults who have maintained at least a 30-pound weight loss for at least one year. 89% reported using both diet and physical activity for their loss. Over 55% reported receiving some type of weight loss assistance from a commercial program, physician or nutritionist. Most participants (83%) indicated a trigger for their weight loss. Medical triggers were most common (23%). A medical trigger was broadly defined and included such things as their physician telling

them to lose weight or a family member having a heart attack. Those who stated medical reasons for their loss also had better initial losses and maintenance. Medical triggers were also associated with less regain during the two-year follow-up *[R]*.

The USPSTF concludes that there is insufficient evidence to recommend for or against routine behavioral counseling to promote either a healthy diet or physical activity *[M]*. However, intervention is encouraged due to the numerous benefits associated with consumption of a healthy diet and exercise in the prevention of obesity.

Primary care physicians could have a significant impact on dealing with obesity since it is estimated that they see over 11% of the population every month *[C]*. Patients who reported receiving advice to lose weight during a routine checkup were more likely to report trying to lose weight than those who did not *[D]*.

Obese persons should be encouraged to enroll in programs that, at a minimum, have three in-person encounters in a three-month period, but to ensure effectiveness, such patients should be encouraged to enroll in intensive programs that last for a year, combine nutritional and exercise counseling, and have a long-term maintenance program *[M]*.

Related Guidelines

The NGC summaries of ICSI guidelines Prevention and Management of Obesity (Mature Adolescents and Adults and Primary Prevention of Chronic Disease Risk Factors.

See also the "Resources Available" section in the original guideline document.

Osteoporosis Screening (Level II)

Service

To achieve and maintain maximum bone density, the ICSI Diagnosis and Treatment of Osteoporosis guideline (see NGC summary) recommends patients should have risks for osteoporosis reviewed when they present to their provider offices. In addition to reviewing historical risk factors, it is important to record accurate serial height measurements with a stadiometer and observe posture for kyphosis. Patients with significant acquired kyphosis and/or an historical height loss greater than four centimeters (1.6 inches) or measured height loss greater than two centimeters (0.8 inches) of one inch should have lateral vertebral assessment with dual energy X-ray absorptiometry [DXA] or thoracic and lumbar spine radiographs and bone density testing *[R]*.

For further information on how to proceed with DXA or bone density testing and for which patients these are indicated, see the NGC summary of the ICSI guideline Diagnosis and Treatment of Osteoporosis.

Counseling Messages

Healthy lifestyle discussion at primary prevention visits is important for osteoporosis prevention. This should include topics of low body mass index (BMI), gonadal hormonal status, smoking cessation, weight-bearing and muscle strengthening exercise, alcohol restriction, calcium, vitamin D supplementation and prevention of falls.

Related Guidelines

Refer to the NGC summary of the ICSI guideline, Diagnosis and Treatment of Osteoporosis, for specific details.

Tetanus-Diphtheria Immunization (Td/Tdap) (Level II)

Service

Td/Tdap should be administered as indicated for the following groups.

Adolescents and Adults through Age 64

With the licensure of Tdap (tetanus-diphtheria-acellular pertussis formulated for patients age 11 to 64), recommendations have changed.

Given the epidemiology of the disease, the most important groups to immunize with Tdap are listed below. In these groups consider giving a Tdap if more than three years have elapsed since the last Td *[C]*.

- Middle and high school age patients
- Others with high exposure to middle and high school age patients (teachers, health care workers, etc.)
- Those who might expose infants less than six months of age to pertussis (postpartum, new parents, siblings of infants, day care workers, health care workers, etc.)

Tdap can be administered if at least 18 months since last Td-containing dose *[C]*.

Primary Immunization of Adults Age 18-64

All adults should have completed a primary Td series. A complete series includes two 0.5 cc intramuscular doses given four weeks apart and a third dose given 6 to 12 months after the second dose. With the licensure of the adult Tdap, if possible, the first injection should be Tdap and the other two Td (Tdap is not tested or licensed as a repeated immunization). For all adults, a 0.5 cc intramuscular booster dose of Td is recommended every 10 years thereafter.

Age 65 and Older

Patients age 65 and older should be given Td. It is likely that Tdap will be a valuable vaccine for the elderly, but studies of the vaccine in that age group have not been published.

Efficacy

Pertussis appears to be endemic in middle and high schools *[C]*. Although mortality is very low in patients age 11 to 65 years, pertussis causes substantial morbidity in this age. Thus, the availability of a safe tetanus-diphtheria-acellular pertussis booster (Tdap) for adolescents and adults means it should be routinely given to these age groups. In most situations, Tdap will substitute for Td. Immunization should be provided to those who may expose infants less than six months of age, as these infants are the most vulnerable to the disease. This cocoon strategy will maximize the effectiveness of the vaccine in reducing disease.

A schedule of a single Td booster or DTaP if not previously given between 50 and 65 years has recently been considered cost effective, but evidence about the adequacy of protection against diphtheria with this approach is currently lacking *[R]*.

Related Guidelines

The NGC summary of the ICSI guideline Immunizations.

Varicella Immunization (Level II)

Service

For adults without evidence of immunity, a dose of varicella vaccine should be given followed by a second dose at an interval of at least 28 days. A catch-up second dose of varicella vaccine is recommended for all children, adolescents and adults who received only one dose previously.

Evidence of immunity to varicella includes:

- Documentation of age-appropriate varicella vaccination, which is two doses of vaccine for school-aged children, adolescents, and adults
- History of health care provider diagnosis of varicella illness (if mild or atypical case, providers should seek epidemiologic link with a typical case or laboratory evidence obtained at the time of the illness)
- Self-report of a typical varicella illness
- History of health care provider diagnosis of herpes zoster
- Serologic evidence of immunity or culture evidence of infection
- Born in the United States before 1980

Related Guidelines

The NGC summary of the ICSI guideline Immunizations.

4. **Preventive Services for Which the Evidence Is Currently Incomplete and/or High Burden and Low Cost, Therefore Left to the Judgment of Individual Medical Groups, Clinicians and Their Patients (Level III)**

   Level III services either have insufficient evidence to prove their effectiveness and/or have important harms. For these preventive services in particular, decisions about offering the service should be made on a patient-by-patient basis. It is important to remember that insufficient evidence does not mean the service is not effective, but rather that the current literature is not sufficient to say whether or not the service is effective.

   Refer to the original guideline document for information on Level III services including

   - Advance directives counseling
   - Anxiety and stress counseling
   - Calcium chemoprophylaxis counseling
   - Clinical breast exam screening
   - Dementia routine screening
   - Domestic violence and abuse screening and counseling
   - Drug abuse screening and counseling
   - Injury prevention screening and counseling
   - Menopause and hormone therapy counseling
   - Preconception counseling
   - Pregnancy prevention counseling
   - Prostate specific antigen (PSA) screening and digital rectal exam (DRE) of the prostate
   - Sexually transmitted infection (STI) (other than chlamydia) screening and counseling
   - Skin cancer screening and counseling
   - Thyroid-stimulating hormone (TSH)/Thyroxine (for hypothyroidism screening)

5. **Preventive Services That Are Not Supported by Evidence and Not Recommended (Level IV)**

   Level IV services are those with low predictive value and/or uncertain beneficial action for true positives. They may also be a combination of insufficient evidence, potential for harm in treatment, no defined benefit and/or overuse.

   Refer to the original guideline document for information on Level IV services including

   - CA 125 and ultrasound (for ovarian cancer screening)
   - Coronary heart disease (CHD) routine testing
   - Diabetes routine screening
   - Lab testing (routine)
   - Spirometry (for chronic obstructive pulmonary disease [COPD] screening)
   - Stroke screening

6. **Care Coordination**

   Although some individuals, following health risk assessments and screening tests, will initiate and sustain lifestyle changes on their own, most will require some degree of structured feedback and follow-up to achieve even modest improvements. Patient-centered health care systems should implement evidence-based changes to ensure consistent follow-up of conditions and risk factors, and support for healthier lifestyles.

   Timely feedback

   - Clear, strong personal message
   - Include documentation of "lifestyle vital signs"

   Appropriate interventions

   - Integrate into decision support
   - If screening and/or counseling results warrant treatment, see treatment guidelines

   Optimal follow-up

   - Plan for and anticipate upcoming preventive service needs. Electronic systems may be particularly beneficial for advanced ordering of services.
   - Providing preventive screening and counseling services.
   - If screening and/or counseling results warrant additional follow-up, proceed as indicated. See also treatment guidelines as noted in the specific topic sections.

Definitions:

Classes of Research Reports:

A. Primary Reports of New Data Collection:

   Class A:

   - Randomized, controlled trial

   Class B:

   - Cohort study

   Class C:

   - Non-randomized trial with concurrent or historical controls
   - Case-control study
   - Study of sensitivity and specificity of a diagnostic test
   - Population-based descriptive study

Class D:

- Cross-sectional study
- Case series
- Case report

B. Reports that Synthesize or Reflect upon Collections of Primary Reports:

Class M:

- Meta-analysis
- Systematic review
- Decision analysis
- Cost-effectiveness analysis

Class R:

- Consensus statement
- Consensus report
- Narrative review

Class X:

- Medical opinion

CLINICAL ALGORITHM(S)

A detailed and annotated clinical algorithm is provided for Preventive Services for Adults.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is classified for selected recommendations (see "Major Recommendations").

This guideline is a synthesis of recommendations from other Institute for Clinical Systems Improvement (ICSI) guidelines, primary evidence through literature reviews, other professional groups, particularly United States Preventive Services Task Force (USPSTF), and workgroup consensus.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate use of a comprehensive approach to the provision of preventive services, counseling, education, and disease screening for low-risk, asymptomatic

adults as demonstrated by increased percentage of adult patients on time with Level I preventive services

POTENTIAL HARMS

Aspirin Chemoprophylaxis

Aspirin therapy has been associated with an increased rate of gastrointestinal bleeding and hemorrhagic stroke. Estimates of the magnitude of benefits and harms of aspirin therapy vary with an individual's risk for coronary heart disease (CHD).

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- This clinical guideline is designed to assist clinicians by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition. A guideline will rarely establish the only approach to a problem.
- This clinical guideline should not be construed as medical advice or medical opinion related to any specific facts or circumstances. Patients are urged to consult a health care professional regarding their own situation and any specific medical questions they may have.
- This resource is intended to assist in the prioritization of screening maneuvers, tests, and counseling opportunities. It is not intended to diagnose or treat any condition. Consequently, once a health issue or condition has been uncovered, other guidelines (such as the "Lipid Management in Adults" guideline or "Hypertension Diagnosis and Treatment" guideline) will take precedence during any further diagnosis and management.
- It is the guideline development group's assumption that this guideline will primarily serve as a guide for medical groups to develop practice systems for their delivery. While individual clinicians are welcome to refer to this guide, the group does not expect that to be common and it certainly is not the best way to provide important services at high rates. Such an achievement clearly requires the establishment of systems that rely on standing orders, task delegation, reminders, and other automatic ways to identify needs and provide the services.
- While there is good evidence that modifying certain behaviors has positive health benefits (unsafe sex, accidents and safety, nutrition, physical activity), there is minimal evidence at present that screening for these conditions or asking about them in the context of a risk assessment, even if followed by advice from a physician or other provider, will result in a change in behavior or positive outcomes. Therefore, this guideline makes:
    - Minimal recommendations for risk assessment to drive counseling for what are largely lifestyle issues
    - Specific recommendation that risk assessment and counseling about lifestyle not be considered suitable parameters for systematic implementation measures

    - Counseling messages for those clinicians who want to provide such counseling or whose patients express an interest in receiving this information
- Evidence is insufficient to warrant recommendations for a number of preventive services. Refer to the original guideline document for more information (see "Guideline Availability" field in this summary).

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Once a guideline is approved for general implementation, a medical group can choose to concentrate on the implementation of that guideline. When four or more groups choose the same guideline to implement and they wish to collaborate with others, they may form an action group.

In the action group, each medical group sets specific goals they plan to achieve in improving patient care based on the particular guideline(s). Each medical group shares its experiences and supporting measurement results within the action group. This sharing facilitates a collaborative learning environment. Action group learnings are also documented and shared with interested medical groups within the collaborative.

Currently, action groups may focus on one guideline or a set of guidelines such as hypertension, lipid treatment, and tobacco cessation.

Detailed measurement strategies are presented in the original guideline document to help close the gap between clinical practice and the guideline recommendations. Summaries of the measures are provided in the National Quality Measures Clearinghouse (NQMC).

Key Implementation Recommendations

The following system changes were identified by the guideline work group as key strategies for health care systems to incorporate in support of the implementation of this guideline.

1. Prioritization and implementation of preventive services should be part of the overall system and should include the following:
    - Practice preventive services at every clinic visit while addressing high-priority services.
    - Individualize preventive services; regularly assess patient risk factors.
    - Provide resources around lifestyle change and available community resources.

2. Develop a plan for staff and provider education around preventive services and organizational goals for implementation of preventive services (should also include education around "level" of service and the rationale behind each level).

3. For those organizations having electronic medical records (EMR), develop a decision support component that will generate reminders for preventive services in order to support completion of recommended Level I services.
4. For those organizations with a paper medical record, create a "tickler" system that will generate reminders for preventive services in order to support completion of recommended Level I services.
5. Develop a "catch-up" plan for those patients who are not on time with services by creating a tracking system that allows for periodic medical record audits to identify patient gaps in preventive services.
6. Develop a collaborative relationship with patients in order to activate/motivate them to practice preventive health.
7. Place throughout the facility patient education materials that focus on preventive services and the importance of each. Materials may include, but are not limited to, posters, pamphlets, videos and available Web sites, as well as services available in the community.
8. Develop a process for encouraging the elderly that it is important for them to be accompanied by a family member/caretaker at each visit.

IMPLEMENTATION TOOLS

Clinical Algorithm
Patient Resources
Pocket Guide/Reference Cards
Quality Measures

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

RELATED NQMC MEASURES

- Preventive services for adults: percentage of patients with all Level I preventive services on time according to the guideline delivery schedule.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Institute for Clinical Systems Improvement (ICSI). Preventive services for adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2008 Oct. 68 p. [156 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1995 Jun (revised 2008 Oct)

GUIDELINE DEVELOPER(S)

Institute for Clinical Systems Improvement - Private Nonprofit Organization

GUIDELINE DEVELOPER COMMENT

Organizations participating in the Institute for Clinical Systems Improvement (ICSI): Affiliated Community Medical Centers, Allina Medical Clinic, Altru Health System, Aspen Medical Group, Avera Health, CentraCare, Columbia Park Medical Group, Community-University Health Care Center, Dakota Clinic, ENT Specialty Care, Fairview Health Services, Family HealthServices Minnesota, Family Practice Medical Center, Gateway Family Health Clinic, Gillette Children's Specialty Healthcare, Grand Itasca Clinic and Hospital, HealthEast Care System, HealthPartners Central Minnesota Clinics, HealthPartners Medical Group and Clinics, Hutchinson Area Health Care, Hutchinson Medical Center, Lakeview Clinic, Mayo Clinic, Mercy Hospital and Health Care Center, MeritCare, Mille Lacs Health System, Minnesota Gastroenterology, Montevideo Clinic, North Clinic, North Memorial Care System, North Suburban Family Physicians, Northwest Family Physicians, Olmsted Medical Center, Park Nicollet Health Services, Pilot City Health Center, Quello Clinic, Ridgeview Medical Center, River Falls Medical Clinic, Saint Mary's/Duluth Clinic Health System, St. Paul Heart Clinic, Sioux Valley Hospitals and Health System, Southside Community Health Services, Stillwater Medical Group, SuperiorHealth Medical Group, University of Minnesota Physicians, Winona Clinic, Ltd., Winona Health

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GUIDELINE COMMITTEE

Committee on Evidence Based Practice

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GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Institute for Clinical Systems Improvement (ICSI). Preventive services for adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Oct. 87 p. [172 references]

GUIDELINE AVAILABILITY

Electronic copies: Available from the Institute for Clinical Systems Improvement (ICSI) Web site.

Print copies: Available from ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; Web site: www.icsi.org; e-mail: icsi.info@icsi.org.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Preventive services for adults. Executive summary. Bloomington (MN): Institute for Clinical Systems Improvement, 2008 Oct. 1 p. Electronic copies: Available in Portable Document Format (PDF) from the Institute for Clinical Systems Improvement (ICSI) Web site.
- ICSI pocket guidelines. May 2007 edition. Bloomington (MN): Institute for Clinical Systems Improvement, 2007.

Print copies: Available from ICSI, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; telephone, (952) 814-7060; fax, (952) 858-9675; Web site: www.icsi.org; e-mail: icsi.info@icsi.org.

PATIENT RESOURCES

The following is available:

- Preventive services for adults. Bloomington (MN): Institute for Clinical Systems Improvement, 2007 Oct. 55 p.

Electronic copies: Available in Portable Document Format (PDF) from the Institute for Clinical Systems Improvement (ICSI) Web site.

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NGC STATUS

This summary was completed by ECRI on May 5, 1999. The information was verified by the guideline developer on July 6, 1999. This summary was updated by ECRI on April 15, 2002, and March 14, 2003. The updated information was verified by the guideline developer on May 15, 2003. This summary was updated again by ECRI on March 22, 2004, November 10, 2004, December 30, 2005, January 25, 2007, and December 20, 2007. This summary was updated by ECRI Institute on January 9, 2009.

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